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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Chio WONG

Appl. No. 10/051,362

Confirmation No. 9086

Filed: January 22, 2002

Art Unit: 1731

Examiner: Not Yet Assigned

Atty. Docket No.  
33419-177855

For: CRYSTALLIZED BOTTLENECK OF  
POLYESTER BEER BOTTLE AND  
MANUFACTURING METHOD FOR THE  
SAME

Customer No.



26694

PATENT TRADEMARK OFFICE

**Preliminary Amendment**

Honorable Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicant submits the following Preliminary Amendment.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are needed to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims), and any other fee deficiency are hereby authorized to be charged, any overpayments credited to, our Deposit Account No. 22-0261.

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*Amendments*

*In the Specification:*

Please amend the specification with the substitute specification.

*In the Claims:*

Please amend claims 1-7, 9-10 as follows:

1. (Amended) A crystallized bottleneck of a polyester beer bottle, wherein the crystallized bottleneck has no machined screw thread and wherein a crystallized length of the bottleneck portion is in a range of 0.5-35 mm.

2. (Amended) A crystallized bottleneck of a polyester beer bottle according to claim 1, wherein said crystallized length of the bottleneck portion is in a range of 0.5-10 mm.

3. (Amended) A crystallized bottleneck of a polyester beer bottle according to claim 1, wherein said bottleneck is made with a polyethylene terephthalate material.

4. (Amended) A crystallized bottleneck of polyester beer bottle according to claim 1, wherein a flanged ring is provided to said crystallized bottleneck of the polyester beer bottle, and said flanged ring has a plane bottom surface at a proper position spacing from a top flange of the bottleneck; the upper surface of the flanged ring is an acclivitous plane; the acclivitous plane forms an angle of 45° from the vertical direction and converges to the outer surface of the bottleneck portion.

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5. (Amended) A method for manufacturing a crystallized bottleneck of a polyester beer bottle, comprising the steps of:

forming a blank of a bottle made of polyester material through drying;

ejecting the polyester material and shaping said ejected polyester material through cooling, thereby forming an uncrystallized blank of a bottle;

placing the uncrystallized blank of the bottle for 24-72 hours in an air-conditioned environment;

preheating a crystallizer for at least two hours prior to crystallizing the blank of the bottle;

loading a bunker with the uncrystallized blank of the bottle;

delivering to an blank horse's head via a conveyor belt;

sending a bottleneck portion of the uncrystallized bottle blank into said crystallizer to heat the bottleneck portion at a high temperature and crystallize the bottleneck portion via an arbor transmission chain;

at the same time, controlling the temperature of the uncrystallized portion of the blank body, so that the uncrystallized portion of the blank body is not affected by the high temperature environment of the crystallizer;

discharging the polyester bottle blank having a crystallized bottleneck portion through an output blank horse's head;

and delivering to another conveyor belt to cool and shape the polyester bottle blank.

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6. (Amended) A method according to claim 5, wherein before said bunker is loaded with the uncrystallized blank, the temperature of the bottle blank is controlled by an arbor temperature controller; and, after the uncrystallized bottleneck portion of the bottle blank is fed into the crystallizer, the temperature of the bottle blank is controlled by a bottleneck temperature controller.

7. (Amended) A method according to claim 6, wherein when said bunker is loaded with the uncrystallized blank, the temperature of the bottle blank is controlled in a range of 120–150°C.

9. (Amended) A method according to claim 5, wherein the crystallization time required for each bottle blank is controlled in a range of 90-120 sec.

10. (Amended) A method according to claim 5, wherein while the bottle blank is crystallized in the crystallizer, the body portion of the bottle blank is protected from the high temperature environment of the crystallizer by using a cooling partition.

Please add claims 11-16 as follows:

11. A crystallized bottleneck of a polyester beer bottle according to claim 2, wherein said bottleneck is made with a polyethylene terephthalate material.

12. A crystallized bottleneck of polyester beer bottle according to claim 2, wherein a flanged ring is provided to said crystallized bottleneck of the polyester beer bottle, and said

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flanged ring has a plane bottom surface at a proper position spacing from a top flange of the bottleneck; the upper surface of the flanged ring is an acclivitous plane; the acclivitous plane forms an angle of 45° from the vertical direction and converges to the outer surface of the bottleneck portion..

13. A method according to claim 6, wherein the crystallization time required for each bottle blank is controlled in a range of 90-120 sec.

14. A method according to claim 7, wherein the crystallization time required for each bottle blank is controlled in a range of 90-120 sec.

15. A method according to claim 8, wherein the crystallization time required for each bottle blank is controlled in a range of 90-120 sec.

16. A bottle, comprising:  
a polyester body having a neck extending therefrom, the neck being crystallized with a length of about 0.5mm - 10mm, and wherein the neck does not have a machined screw thread.

***In the Abstract:***

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Please amend the specification with the separately attached Abstract of the Disclosure.

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**Remarks**

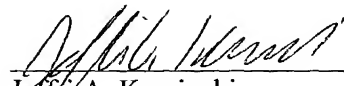
The above amendments have been made to place the application in better form for examination. Upon entry of the foregoing amendment, claims 1-16 are pending in the application, with claims 1 and 5 being the independent claims. New claims 11-16 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Attached hereto is a substitute specification, and a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Applicant hereby requests an action on the merits at the earliest opportunity.

Respectfully submitted,

Date: May 3, 2002

  
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**Version with markings to show changes made**

1. (Amended) A crystallized bottleneck of a polyester beer bottle, wherein the crystallized bottleneck ~~is~~ has no machined a-screw thread and wherein a crystallized length of the bottleneck portion is ~~in~~ a range of 0.5-35 mm.

2. (Amended) A crystallized bottleneck of a polyester beer bottle according to claim 1, wherein said crystallized length of the bottleneck portion is in a range of 0.5-10 mm.

3. (Amended) A crystallized bottleneck of a polyester beer bottle according to claim 1 ~~or~~ 2, wherein said bottleneck is made with a polyethylene terephthalate material.

4. (Amended) A crystallized bottleneck of polyester beer bottle according to claim 1 ~~or~~ 2, wherein a flanged ring is provided to said crystallized bottleneck of the polyester beer bottle, and said flanged ring has a plane bottom surface at a proper position spacing from ~~the~~ a top flange of the bottleneck; the upper surface of the flanged ring is an acclivitous plane; the acclivitous plane forms an angle of 45° ~~on~~ from the vertical direction and converges to the outer surface of the bottleneck portion.

5. (Amended) A method for manufacturing a crystallized bottleneck of a polyester beer bottle ~~according to claim 1~~, comprising the steps as ~~follows~~ of:



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forming a blank of a bottle made of polyester material ~~is formed~~ through drying;  
~~;~~ejecting the polyester material and shaping ~~itsaid ejected polyester material~~ through cooling,  
 thereby forming an uncrystallized blank of a bottle;

placing ~~then~~ the uncrystallized blank of the bottle ~~is placed~~ for 24-72 hours in an air-  
conditioned environment;

preheating a crystallizer ~~is preheated~~ for at least two hours or more before ~~prior to~~  
 crystallizing ~~to the blank of the bottle is started;~~

loading a bunker ~~is loaded~~ with the uncrystallized blank of the bottle;

~~;~~which is deliverined to an blank horse's head via a conveyor belt;

~~;~~thensending a bottleneck portion of the uncrystallized bottle blank ~~is sent into a said~~  
 crystallizer to heat ~~it~~ the bottleneck portion at a high temperature and crystallize ~~it~~ the bottleneck  
portion via an arbor transmission chain;

at the same time, controlling the temperature of the uncrystallized portion of the blank body  
~~is controlled~~, so that the uncrystallized portion of the blank body ~~it is not a~~ affected by the high  
temperature environment of the crystallizer ~~at high temperature;~~

discharging the polyester bottle blank having a crystallized bottleneck portion ~~is discharged~~  
 through an output blank horse's head;

~~-and deliverined~~ to another conveyor belt to cool and shape the polyester bottle blank ~~it.~~

6. (Amended) A method according to claim 5, wherein before ~~a said~~ bunker is loaded with

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the uncrystallized blank, the temperature of the bottle blank is controlled by an arbor temperature controller; and, after the uncrystallized bottleneck portion of the bottle blank is fed into the crystallizer, the temperature of the bottle blank is controlled by a bottleneck temperature controller.

7. (Amended) A method according to claim 6, wherein when ~~a~~said bunker is loaded with the uncrystallized blank, the temperature, of the bottle blank is controlled in a range of 120–150°C.

9. (Amended) A method according to ~~any of~~ claims 5–8, wherein the crystallization time required for each bottle blank is controlled in a range of 90–120<sub>sec</sub>.

10. (Amended) A method according to claim 5, wherein ~~during~~while the bottle blank is crystallized in the crystallizer, the body portion of the bottle blank is protected~~free for the influence~~ from ~~an~~the high temperature environment of the crystallizer at high temperature ~~by~~ using a cooling partition.



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Examiner: Not yet assigned

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**ATTENTION: OFFICIAL DRAFTSPERSON**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Pursuant to the provisions in 37 C.F.R. § 1.121(d), Applicant requests approval of the drawing changes shown in red ink for Figure 4 on the attached one (1) sheet.

Respectfully submitted,

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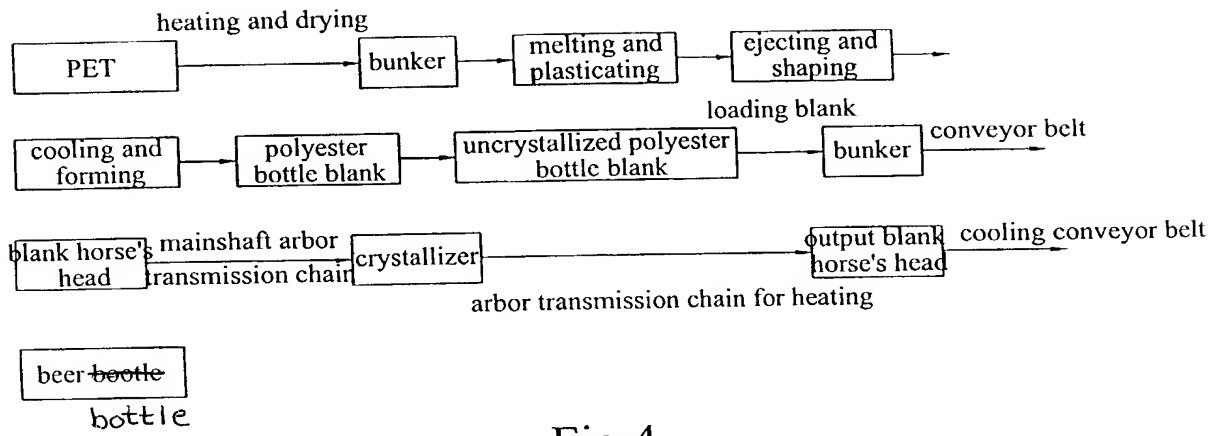


Fig.4

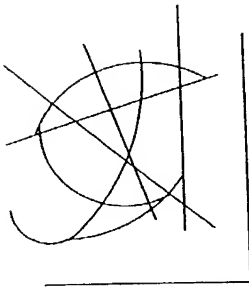


Fig.5

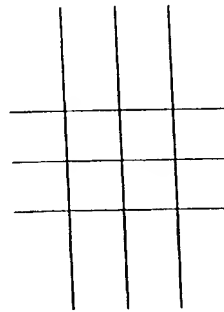


Fig.6

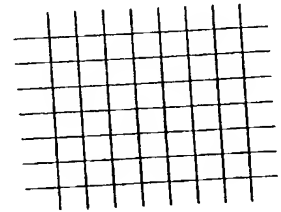


Fig.7